



GED Focus Paper

# China's "Great Wall" of Debt

Chinese Debts and their  
Macroeconomic Implications

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## China's Great Wall of Debt

The figures of the Chinese debts are subject to ongoing discussion among economists. The question whether the enormous rise in Chinese corporate and private debt over the past decade will lead to another global financial crisis or will be managed by the Chinese government is one of vital importance to the global economy: if China's debt management fails, the macroeconomic effects are expected to overshadow the catastrophic effects of the 2008 financial and economic crises by large. The Economist (7 May 2016) even goes as far as to state the question not if, but when China's debt bubble will burst. The term "China's Great Wall of Debt" coined by Dinny McMahon (2018) to emphasize the connection between recent Chinese growth and corresponding debt seems therefore very well put.

Approximating the real figures of Chinese debt is the starting point, from which any considerations regarding the expectations of possible effective government handling can begin. The validity of this study therefore is dependent on the reliability of its assumptions in respect of basic figures. Such are not easily required or chosen, since not only the International Monetary Fund continues to point out general shortcomings regarding the adequacy of the data provided by the Chinese authorities (IMF 2017: *Stat. Iss.* 11 f) but also international experts (e.g. Balding 2013: 23). A realistic estimation of debt levels for that reason has to rely on a variety of sources that in their combination may provide an approximation to the real figures. Even so, any convergence has to remain essentially an informed guess based on the most dependable sources available. The approach in this study is based for the most part on the figures provided by the International Monetary Fund (IMF), the Bank for International Settlements (BIS) and the People's Bank of China (PBOC). This combination of international and domestic figures promises results, which are not too lopsided in their emphasis and offer different perspectives as well.

While figures regarding government and household debt levels relative to GDP are comparably easy to compose, acquiring estimations regarding the level of corporate debt proves rather difficult. This is not only due to the sustenance of many traditional state-owned enterprises (SOEs): The extensive and profound entanglement of the private and the public corporate sectors in China goes far beyond clearly designated institutions. This leads to uneasy and in many cases outright impossible differentiation between both sectors (IMF 2017: 51-53). Relations among privately and publicly held corporations are manifold and extend to a wide array of significant factors, such as significant government influence on company decisions, far-reaching dirigiste steering of economic development and – maybe most important – the massive creation of local government spending vehicle companies. Starting with the Shanghai Municipal Construction Investment and Development General Company in 1992, other such firms were established and massively spread, especially in 2008 (Clarke 13 f).

Another factor most volatile might be the role played by the shadow banking institutions, whose extent in the recent months has been described by analysts as in full swing (The Telegraph 6 April 2016). This is due partially to the measures, which the Chinese government has implemented in order to curb the excessive lending by traditional banks that has been going on since years. Two thirds of lending from non-banks are considered to be "bank loans in disguise", enabling to get around the formal and informal guidance as well as the lending restrictions regarding certain industries established by the government (The Economist Feb 2 2016). With China's bank loans declining for the first time in the first quarter of 2017 under the influence of these restrictions, borrowers seem to have plugged the gap with shadow financing: Its contribution to the national economy should account for about 15.7 percent of the country's total corporate financing (Bloomberg April 18 2017).

The following chapters will be constituted by a very brief summary of the events which lead to the ongoing rise in Chinese debts. This will be followed by an accounting of the total level of Chinese debt relative to GDP, partitioned to debt levels regarding government, household

and corporate sectors. The conclusion will focus on the financial sector, deal with the institution of shadow banking and provide a short outlook regarding the manageability of the totalled debt figures.

### **China in “crisis mode”: What happened in the wake of 2008?**

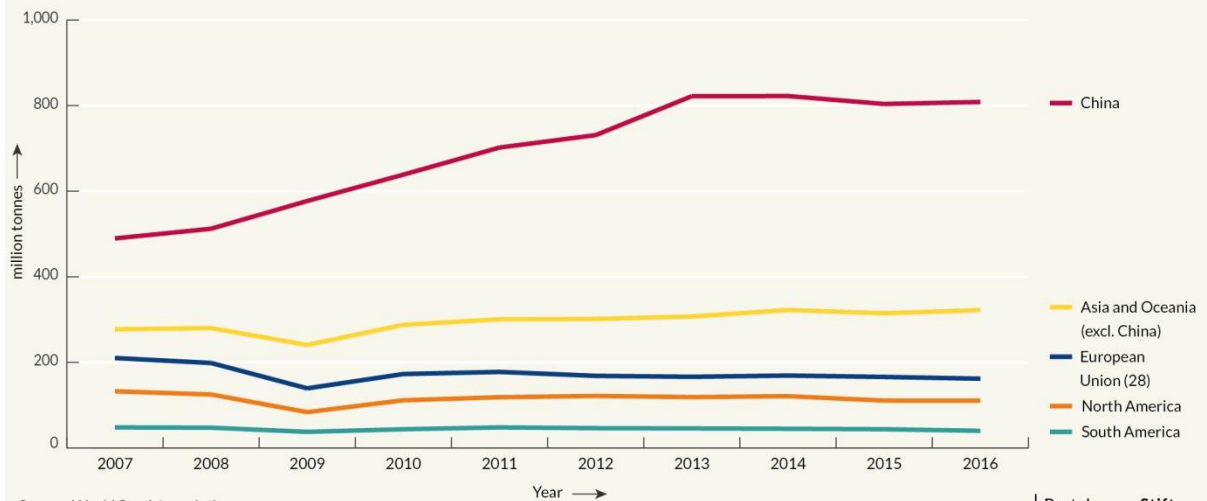
Chinese growth has been the main driver of the global economy since the global financial crisis began roughly a decade ago. It is estimated, that China contributes 25-30 % to total global growth (Forbes October 30 2016). During the crisis, global trade nearly collapsed. This meant a huge decrease in China’s exports, a sector that had largely fuelled the country’s rise to a global economic superpower. As a result, many Chinese factories closed and millions of workers lost their jobs. The government, concerned that this spike in unemployment might lead to social unrest, announced the world’s largest stimulus package. China was in “crisis mode”, as Sebastian Heilmann (2015) has called this capability of swift and direct intervention. The \$600 billion plan was generally tuned to encouraging a massive boost to public infrastructure building (ThomsonReuters 2018).

The goal was to quickly create millions of jobs, ranging from construction to accounting. Typically, such a massive injection of cash into a country’s economy is funded directly through government fiscal spending. China however chose to fund the stimulus via loans from its state banking system. Local governments also borrowed heavily to promote major projects. But at the time most weren’t permitted to borrow directly from banks or to issue bonds, so they needed to find another way that would allow them to borrow. In order to mitigate the effects of the crisis, Local Government Financing Vehicles (LGFV) were created by cities and provincial authorities to circumvent official limits on fundraising (Clarke 2016: 58 f). These are in effect state-owned entities created in order to raise funds for local government development projects, such as real estate or infrastructure. They were able to take bank loans and issue bonds and it seems they did a good job: if China wouldn’t have proven overall resistant to the implications of the crisis, world GDP in 2009 would have decreased not only 0.1 but 1.3 percent (World Finance October 13 2017).

The immense loan-financed infrastructure measures might backlash at crucial points of the Chinese economy: The IMF attributes to significant parts of total growth of the Chinese economy to being carried by public investments, which are financed by loans (IMF 2017: 31). SOEs are fostered by ever-new cheap credits, impelling them to produce far more goods than there is demand for: in July 2017, the Chinese steel industry produced 74 million tons – more than ever before (Business Insider August 24 2017) (fig. 1). The biggest concern is the rate at which China’s companies are borrowing. Since 2008, non-financial sector debt-to-GDP has risen at extreme speed, approximating 250 percent in 2017 (fig. 2).

**Figure 1: Crude steel production 2007-2016**

(million tonnes)



**Figure 2: Non-Financial Sector Debt: High and Rising**

(in percent of GDP)



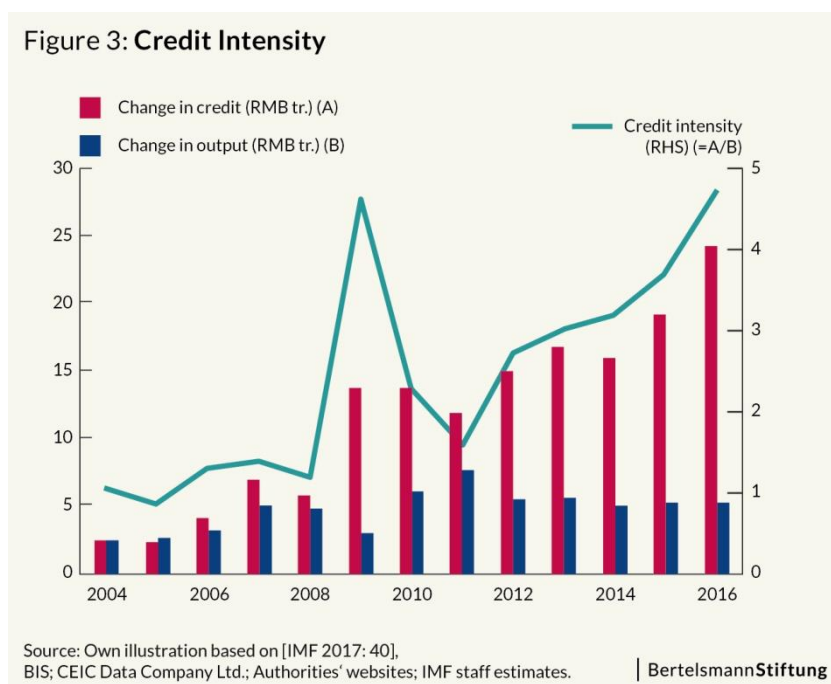
Encouraged by government calls to support economic growth, companies collected cheap credit. A report by Thomson Reuters mentions an estimation by Analysts that “two-thirds of corporate debt is in the hands of China’s sprawling state-owned enterprises, many of which are unprofitable and inefficient” (Thomson Reuters 2018). Household incomes are impacted as well, since they have become increasingly tied to the real estate market. This sector threatens to implode, if many of the loans to finance housing and infrastructure prove to be nonperforming.

While official numbers of non-performing loans at Chinese commercial banks total around 1.5 trillion yuan, some analysts conclude the bad debt would be as much as 10 times higher than the official numbers, “because lenders use various methods to conceal the true figures” (Thomson Reuters 2018; Fitch Ratings 2016: September 22 2016). Even the official corporate debt in China soared to around 169 % of GDP in 2016 according to the Bank of



International Settlements, while the figure stood at about 100% in 2008 (BIS October 2016). Experts say the concern is that China's debt has surged at the sort of pace that usually leads to a financial bust and economic slump (Thomson Reuters 2018).

The IMF has revised its growth forecast to 6.7 percent for 2017. The organization expects China to average 6.4 percent growth between 2018 and 2021 (IMF 2017: 9). At the top of the IMF's list of recommendations to make this growth more sustainable is working to tackle the debt issue: Going forward, the IMF sees China's non-financial sector debt to hit nearly 300 percent of GDP by 2022, up from around 240 percent in 2016. The IMF warns, that debt was becoming less effective as a means of stimulating activity: The Guardian (August 15 2017) noted, "China needed three times as much credit in 2016 to achieve the same amount of growth as in 2008". Credit to private households is rising rapidly as well (fig. 3). For that reason, President Xi Jinping has repeatedly urged to give „high priority“ to deleveraging and a more rigid course of intervention against firms, which are only kept alive by constant flow of new credits.



## Chinese government debt

The World Economic Forum places China on rank 63 of 137 countries with an estimated government debt of about 46.2 percent (WEF 2018). But it seems that local government indebtedness is not being included in this figure. Decisive for any estimation of the Chinese central government's debt therefore is the question how the debts of the regional authorities are dealt with. As parts of the whole state they are certainly to be included, but that raises the further problem how the LGFVs' debts should be assessed.

### a) Local government debt

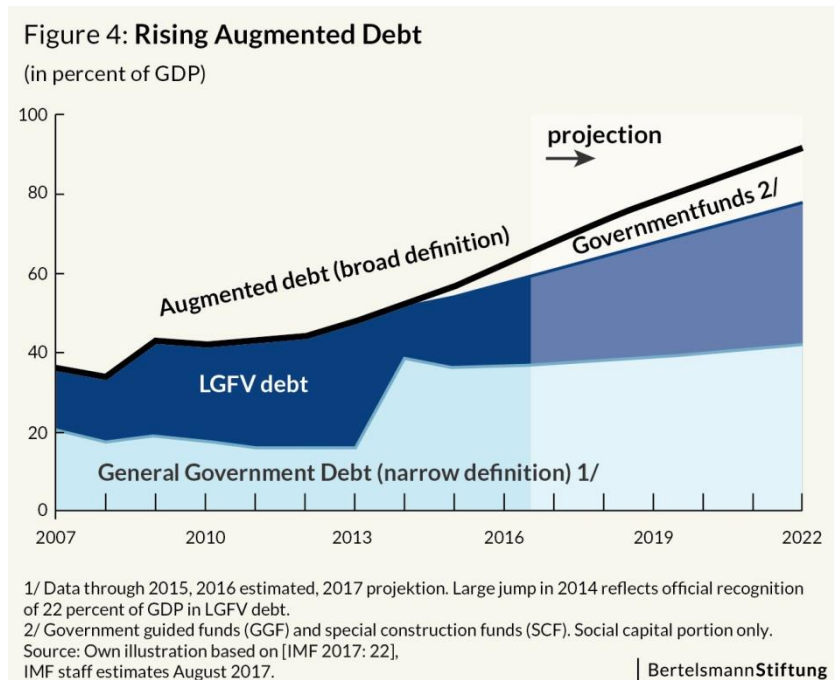
It seems clear that there is no reliable way to make clear incisions regarding the levels of public and corporate debt in such cases; resulting from the fact that there is no adequate data available to make any such estimations and considering that the interrelations in

between public and corporate interests in employment, fields of action and debts of LGFVs are too intense to be reasonably divided. In August 2017, the IMF tried to account for these facts by introducing a model of „augmentation“ when dealing with LGFV debt, arguing „these obligations financed spending that appeared to be mostly non-market based with uncertain returns and by entities that are largely government-controlled“ (IMF 2017 22f). In 2004, after all, two thirds of LGFV debt (22 % of GDP then) was recognized as government obligations. Authorities' view on the problem is somewhat different, claiming LGFVs were standard firms and thus borrowing should be no part of the government sector (IMF 2017: 23). But such claims are difficult to believe in the context of the ongoing deleveraging campaign of president Xi Jinping.

At the moment, local governments still sell state property in order to keep LGFVs in business, some of which are profitable while others are not. Government and local state bank financing therefore creates nonperforming loans that are prone to be endorsed into general state public responsibilities in the long term – while in the short term they are brought into asset management companies busy with debt conversion at least as long as speculative gain from investing into real estate remains high (Shih October 7 2016). Local governments theoretically even could become insolvent, if prices in the real estate industry should collapse. In that case, the general government would have to fill in. This situation might leave potential winnings for the local administration, while the central government ultimately carries the macroeconomic risks (still, in exchange for corresponding gains regarding economic growth and employment). But there are official voices that aspire to strengthen trust in the central governments' ability to restrain further credit spreads: according to Huang Shouhong, director of the State Council Research Office, the idea that the central government will resort to bailouts when local governments suffer debt defaults would be an illusion (China Daily March 6).

## **b) Central government debt**

As of yet, it is not possible to determine how the central government would react to local government insolvencies on a systemic level even if it now strives to stop the uncontrolled lending to LGFVs going on. Judging by these coherencies, it seems mandatory to employ an „augmented debt“ scenario as proposed by the IMF for the calculation of central government debt. This scenario adds other types of government borrowing, e. g. off-budget liabilities borrowed by LGFVs „via bank loans, bonds, trust loans and other funding options“ to the central government debt and on-budget local government debt as identified by the authorities (IMF 2017: 51). Also included are government-guided funds and special construction funds, since they may be considered to be quasi-fiscal. Therefore government debt in an augmented scenario includes credit to LGFVs that is recognized as local government debt, while such that is not adds to the amount of corporate debt. In August 2017, the IMF estimated a figure of 68.1 percent of GDP (augmented government debt) for 2017 (fig. 4). The warning by IMF staff, that some nongovernment activity might be included and that some funds and LGFVs „may end up having substantial revenues“ carries with it a slight hint on the broad scope and reasons for introducing the „augmented debt“ scenario in the first place (IMF 2017: 51). Yet even this definition of government debt may fall short, since it doesn't include PPPs (Public Private Partnerships) due to lack of data.



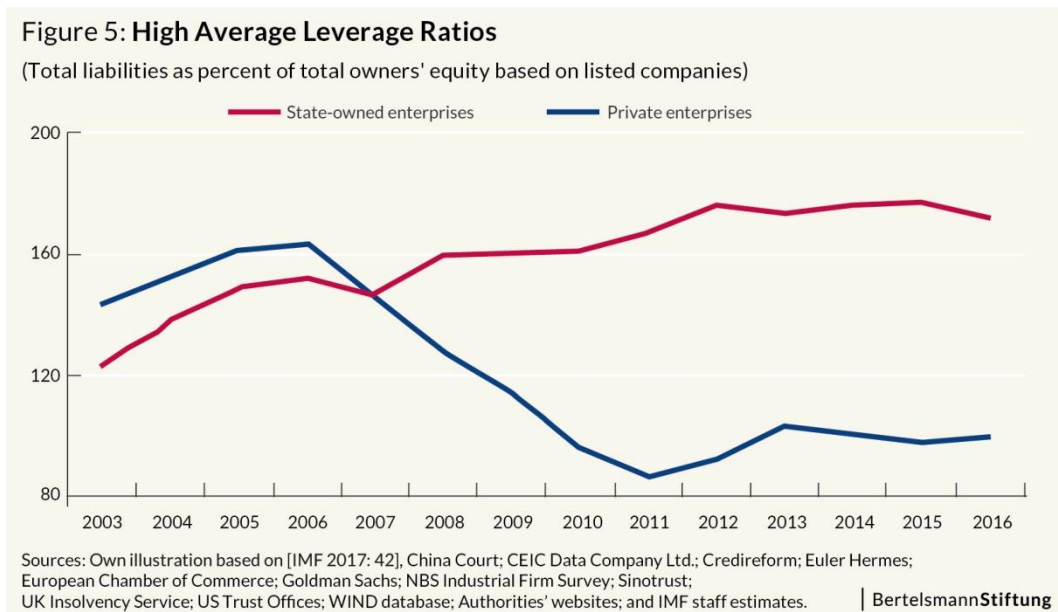
While China uses the English-language abbreviation PPP, it defines the non-government partner as „social capital“ (*shehui ziben*) instead of „private capital“, which opens the door for state-run firms (CPPPC 2017). Particularly local governments in poorer regions, such as Guizhou and Yunnan, are rapidly building a pipeline of PPP projects (The Diplomat March 21 2017). Ultimately, this may put new unmanageable burdens on local-level finances. Most PPP investments may then ultimately transpire as government debt, similar to those undertaken by LGFV's. Additionally, according to analysts at Fitch Ratings Ltd., Bank of America Corp. and Oxford Economics Ltd., about 55 percent of partners in the PPP projects seem to have turned out to be state-owned enterprises (Bloomberg February 22 2017). Still, this estimation was based on demonstration projects selected by the government to show how PPPs should work. Correspondingly, the analysis of a larger project database cited by Bank of America finds that state-owned companies are taking up 74 percent of the projects by value. A Bloomberg report notes, that more than “11,000 such projects totaling 13.5 trillion yuan (\$2 trillion) had been registered as of end of 2016, Ministry of Finance data shows” (Bloomberg February 22 2017).

Some private firms are getting involved, but according to surveys they often don't have much confidence in cooperating with local governments. A survey by China Confidential finds, “More than half of the firms surveyed said that they were concerned about local governments not honoring agreements and were worried about a lack of enforcement of investors' rights” (The Diplomat March 21 2017). State-owned companies on the other hand are less worried about low returns, “because they can borrow at rates as low as two to three percent from government-controlled PPP funds run by central and local authorities and policy banks” (The Diplomat March 21 2017). The IMF calculated the stock of approved PPP projects in end-2016 at 3.2 trillion or 4.3 percent of GDP, while forecasts by UBS estimate RMB 4 trillion (\$580 billion) value of PPP's being enacted in 2017 (The Diplomat March 21 2017). As long as these amalgamations of public and private interests are intact – and continuously supported by the Chinese government's policies – a clear distinction between local and central governments' debt remains impossible. The practice of Chinese PPP's also insinuate that even on the level of single companies the ramifications of state control mechanisms remain considerable but opaque. This deliberate lack of transparency interferes with any comprehensive estimation of Chinese corporate debt as well.

## Chinese corporate debt

The IMF expects a non-financial corporate domestic debt of about 134.9 percent of GDP in 2017 (IMF 2017: 43). To understand the contents of this figure, there are some relevant peculiarities of the Chinese corporate system that need to be assessed.

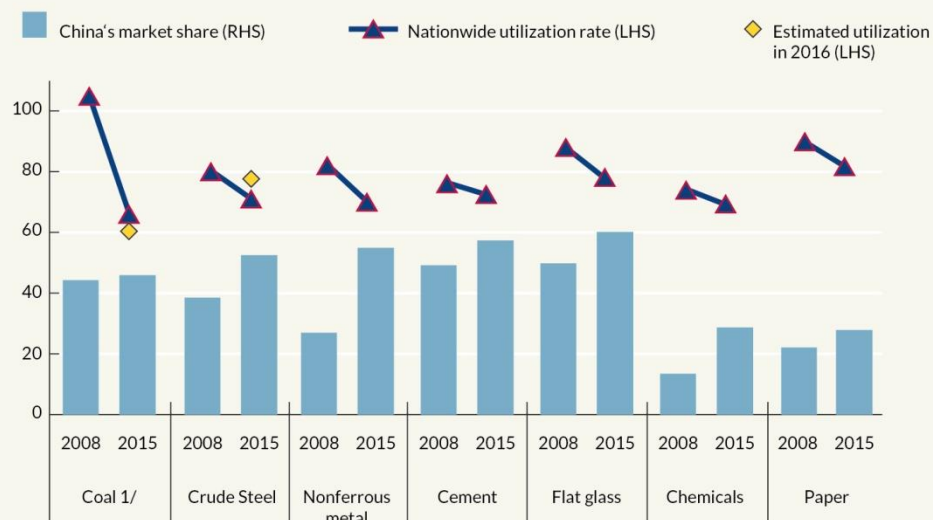
In some aspects closely related to the LGFV business and financing system are the Chinese state-owned enterprises (SOEs). It is estimated, that “China has approximately 150,000 SOEs, of which around 50,000 are owned by the central government and the remainder by local governments” (export.gov July 25 2017). Of these, the central government controls and manages 97 strategic SOEs (so-called *Yang-qi*) through the State Assets Supervision and Administration Commission (SASAC 2018), of which 66 are listed on domestic or international stock exchanges. SOEs, both central and local, account for about 20 percent of China’s total employment and can be found in all sectors of the economy, ranging from tourism to heavy industries (export.gov July 25 2017). China’s leading SOEs receive substantial support from the government: they “benefit from preferential government policies aimed at developing stronger ‘national champions’, while enjoying “preferential access to credit and the ability to issue publicly traded equity and debt” (export.gov July 25 2017). Correspondingly, SOEs also are not subjected to the same tax burdens as their private sector competitors.



As it happens, SOE's have been rated by the IMF to be structurally less efficient than the private sector, too (IMF 2017: 15). Partly due to higher exposure to overcapacity industries, partly driven by still significant social responsibilities and weak corporate governance, SOE's account for more than half of corporate debt and 50 percent of „zombie debt“ outstanding (i. e. old, forgotten debt coming back to haunt debtors) (fig.5 & 6). They additionally receive substantial implicit support estimated at about 3 percent of GDP, other benefits such as operating in protected markets excluded (IMF 2017: 15).

**Figure 6: Overcapacity: Deteriorating Utilization and Large Global Share**

(in percent of total legal designated capacity (left-scale) and global output (right-scale))



Sources: Own illustration based on [IMF 2017: 42], European Chamber of Commerce, Goldman Sachs and IMF staff estimates.  
 1/ Coal capacity exceed 100 percent because coal mines produced over legal designed capacity level in earlier years. Coal capacity utilization in 2016 fell because coal production fell sharper than the cut in coal capacity relative to 2015.

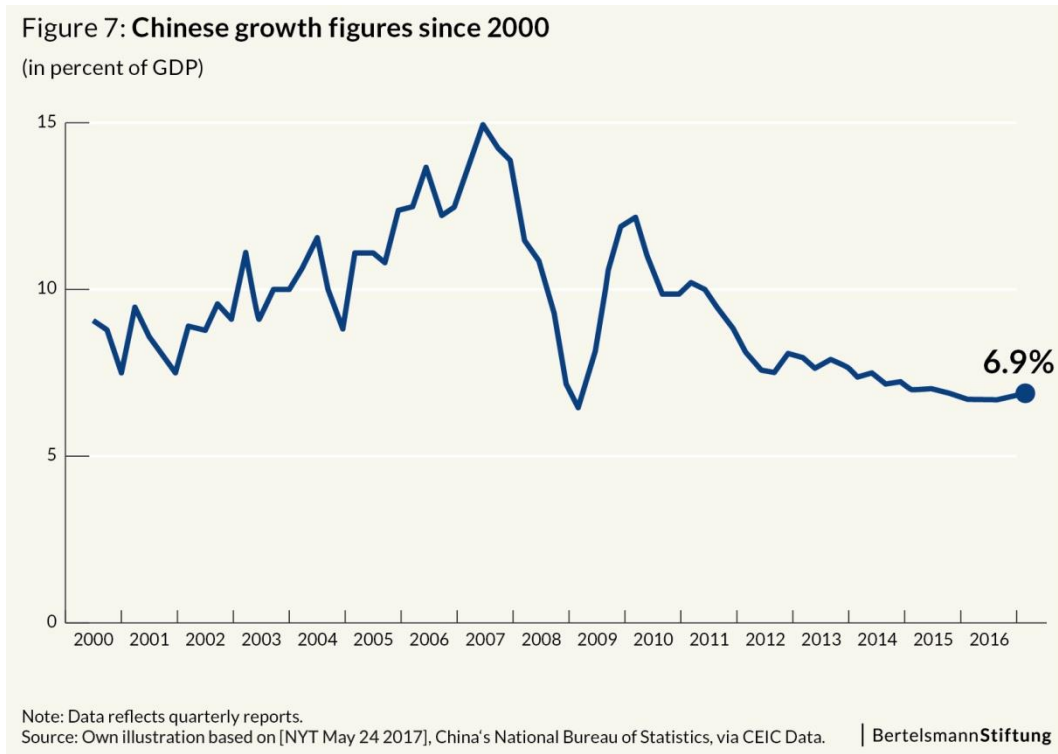
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All of this happens in the context of exploding debt. With Chinese corporate debt soaring to around 169% of GDP in 2016, it reached roughly double the average of other economies, according to the Bank of International Settlements (BIS October 2016). Total non-financial sector debt rose to about 235 percent of GDP in 2016 and is projected to climb further to over 290 percent of GDP by 2022 (IMF 2017: 10). Although at the end of the first half of 2017 corporate debt-to-GDP ratio fell to 165 percent, some analysts consider this to be more of a stabilization than a significant reduction (cnbc.com August 18 2017). Yukon Huang of the Carnegie Endowment's Asia Program says, "China's debt problems are largely due to the poor performance of a subset of SOEs. But because many of the largest SOEs are seen as China's 'national champions', the necessary reforms have been delayed" (Carnegie Endowment October 11 2017). While such reforms are considered to be a top priority of the Chinese government and some results like governance and ownership reforms have already been implemented, the years after 2008 saw a change in trend towards continuing growth of SOEs, which threatens to crowd out private sector development (IMF 2017: 16). Chinese authorities claim it would be oversimplified to assess the value and efficiency of SOEs only by their financial returns, and it would not be fair to blame them for low efficiency while more consideration should be given to the social and policy responsibilities they have assumed (Jin Zhongxia July 18 2017). In addition, they argue that institutionalizing the Communist Party's leadership within SOEs would help increase their efficiency. Xi Jinping (2017) also confirmed the importance of the state sector in his report at the 19th Party Congress in October 2017.

The IMF on the other hand advised the Chinese authorities to "expedite implementation of their existing reform initiatives to foster competitive neutrality" (IMF 2017: 16). This would include moving SOEs' social functions to the government budget to allow firms to focus on commercial objectives, raising the share of SOEs classified as "commercially competitive", opening additional protected sectors to greater competition from private and foreign investment as well as restructuring of SOEs' underperforming debt. According the IMF, the SOE reform agenda "should also be broadened to include hardening budget constraints by phasing out implicit subsidies on factor inputs and forcing non-viable firms to default and exit if market forces warrant, while providing fiscal support for the affected workers" (IMF 2017: 16). Since competitive neutrality under state ownership may prove to be impossible in



practice, these reforms might also be complemented by transferring more state-owned assets into private ownership. Efforts to reduce overcapacity should also feature greater reliance on market forces and show more attention to underperforming debt (IMF 2017: 31). But such a proactive strategy in effect seeks to trade off short-term economic growth for larger longer-term gain, while strong economic growth remains an important argument for the credibility of the political leadership. For that reason, the central government's growth incentive following the 2008 financial crisis has also to be seen in the context of ensuring political stability (fig. 7).



In 2016, the Chinese government nevertheless seems to have started to take important initial steps in order to facilitate private sector deleveraging: guidelines were issued to broaden the number of tools that companies could use for debt restructuring. In addition a range of administrative measures were introduced to contain financial sector risks (IMF 2017: 20). In the run up to China's 19th Party Congress in October 2017 therefore one of the key questions for most analysts was what kind of measures would be emphasized to deal with China's corporate debt problem (Naughton 2018: 2 f). Feigenbaum and Ma conclude, the apparent problem would be the contradiction between a political mandate of constant, Chinese growth at about 6.5% a year through 2020 and the "deteriorating economic fundamentals that suggest achieving such a growth rate is impossible" (MacroPolo June 26 2017). This discrepancy would account for "internal confusion over whether growth or reforms should be the top priority, especially since reforms will almost certainly require tolerating near-term slowing and ultimately missing numerical growth targets" (MacroPolo June 26 2017; Shih October 7 2016). There are expectations that once the new leadership team is established, reforms will accelerate. But the likelihood of this actually happening depends on whether the new leadership resolves the major contradiction outlined in the 2013 Third Plenum decision paper: This paper issued at the 2013 Meeting of the Communist's Party Central Committee asserts that the market should play the "decisive" role in resource allocation, but it also reaffirms that the state should continue to play the "leading role" in guiding the economy (CSIS March 2015: 2 f). That ambiguity seems to have clouded the formulation and implementation of important reforms, especially those targeting state-owned enterprises, urbanization, and corruption (USPAACC May 16 2017).

Nevertheless, a third of all corporate debt still seems to belong to private enterprises, derived from bank loans, bond offerings or shadow banking activities. A report by China Briefing argues, that many private companies in addition would have off-the-books agreements with their counterparts to guarantee loans: “With many companies having multiple agreements, this creates a chain of debt, significantly increasing each player’s exposure to the debt that has developed.” Therefore not only the indebted companies would be at risk from this situation but also the “sequence of companies that have acted as guarantors to loans and left such agreements off their balance sheets, thus avoiding scrutiny from auditors, regulators, and future lenders.” (ChinaBriefing May 12 2017) For that reason, otherwise seemingly unassociated companies in proximity to the compromised enterprises might also be dragged into the problem through bond and share sell offs. The ramifications of even occasional loan defaults might in that way prove to be far-reaching. Especially SOEs and LGFVs often seem to re-lend their cheaply obtained credit at higher rates (Shih October 7 2016). In the same way, many credits are being raised in order to be able to pay back preexisting ones. Optimistic estimations therefore assume a part of non-performing loans at about 10 percent, others like the Hongkong broker CLSA even of between 15 – 19 percent (CLSA May 20 2016) The IMF estimates a figure of 15,5 percent of all corporate loans to be non-performing (IMF April 2015).

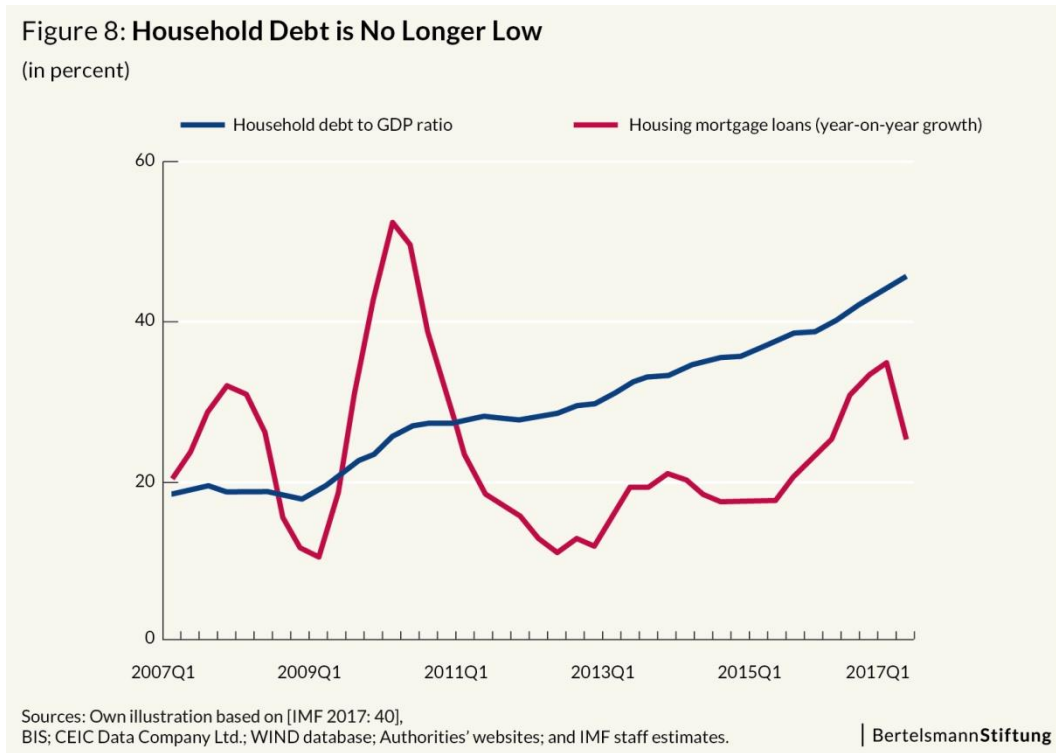
In 2016, nearly half of China’s \$226.5 billion worth of outbound foreign investments (stocks) was transacted by private companies. Companies like Wanda have acquired foreign companies like AMC Entertainment Holdings, Odeon & UCI Cinemas or Legendary Entertainment, while e.g. the Anbang Insurance Group was spending billions on the Waldorf Astoria New York hotel (New York Times February 22 2018). As a result, President Xi Jinping approved extensive banking regulations on the international acquisitions of private Chinese companies, concentrated on such big firms who had been enhancing their international portfolios in recent years: “The main targets were four companies who were responsible for a full 18% (\$55 billion) of China’s foreign investments over the past two years: HNA Group, Anbang Insurance Group, Fosun International, and Wanda” — the last one being prohibited from taking out new loans from state-owned banks in the process (Forbes July 25 2017). This reaction of the Chinese government in opposition to so-called “irrational investments” illustrates that there are strong resemblances between many privately owned and state-owned companies: This is especially true when it comes to strategic decisions, governance issues, resource allocation and financing options. While China’s economic reality can facilitate the sharing of losses across other actors beyond the state – for example by way of selling assets of SOE’s in order to repay loans, if needed – it is also important to recognize that it is quite impossible at least for big private companies to act without the consent of the government.

It seems mandatory, therefore, that China takes further steps towards a credible decoupling of private and political economic interests. This may be considered to be a cultural issue in the first place, but it is also a matter of adapting to economic reality: In the long term, sustainable growth depends on entrepreneurial agility and freedom from corruption as well as other restrictions that might come with a strongly steered economic development.

## Chinese household debt

The rising wealth of urban residents, based upon an almost uninterrupted property boom, has resulted in an extreme rise in household debt. China’s rate of private property ownership with over 89.68 percent of households owning an own house or apartment has grown to be among the highest in the world as a survey by Chengdu’s Southwestern University of Finance and Economics reveals – and it has risen up from close to zero only two decades ago. For that reason, property has become an immense carrier of wealth in China: more than half of Chinese family wealth is held in the form of property, according to the Chinese

Academy of Social Sciences (SCMP August 6 2017). PBOC data shows, that consumer loans have grown accordingly: almost 50 percent since the start of last year, when the government began encouraging lending to households (New York Times September 25 2017). And lending could even grow considerably higher: The IMF expects China's household debt as a percentage of its economic output to double by 2022 compared with a decade before: Household "credit growth to the real economy remains rapid with the credit-to-GDP ratio exceeding its historical trend by more than 25 percent of GDP" (IMF 2017: 40). In August 2017, the IMF estimated the household debt to be equivalent to 46.3 percent of GDP in 2017 (fig. 8).



By value, home mortgages represent a majority of China's new household loans adding to a surge in real estate prices. But car loans have been growing even faster in percentage terms and credit card debt is rising as well (New York Times September 25 2017). In absolute figures, consumer debt financed by Chinese banks has grown from 3.8 trillion yuan at the end of 2007 to 17.4 trillion yuan at the end of last year, a compound annual growth rate of 21 percent, according to a report of Fitch Ratings (Thomson Reuters November 11 2016). Growth in income has reportedly been "much more modest, rising 6.3 percent in January to September compared with the year-earlier period, which is the weakest pace since 2013 when the National Bureau of Statistics first started issuing the data" (Thomson Reuters November 11 2016). It's not surprising, then, that the rapid growth in outstanding consumer loan balances has been accompanied by an increase in non-performing loans across all segments of consumer debt.

Regional governments across China began tightening restrictions on home purchases in 2016, for example by "requiring would-be buyers to pay taxes and social insurance premiums in a locale for a certain amount of time before purchasing property there" (NikkeiAsian Review August 19 2017). Raising local interest rates aims to make buying more expensive and to contain excessive speculation while regulators directed banks to limit the issuance of home loans. Since March 2017, over forty cities have placed restrictions on home purchases, including restrictions from buying second homes in some areas. But these rules failed to root out real estate speculation effectively, and prices continue to surge in major cities such as Beijing and Shanghai at a pace which some analysts fear points to an inflating bubble (NikkeiAsian Review August 19 2017). Part of the reason might be that not all buyers face

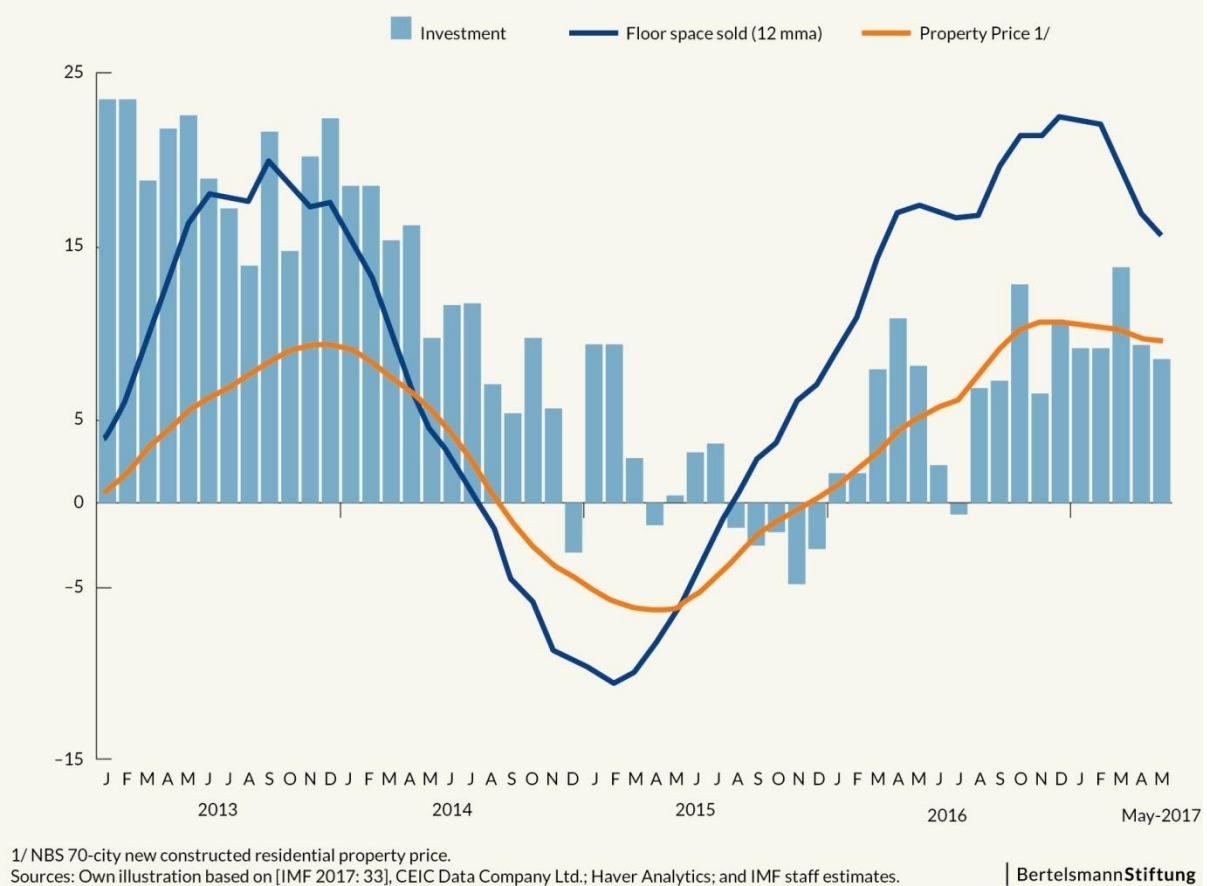


the same barriers when borrowing becomes more expensive: Using mortgage rates as a means to rein in prices might exacerbate inequality between the rich paying all cash, and middle-class buyers who cannot purchase property without corresponding financing.

Additionally, in many regions and cities restrictive policies are only reluctantly implemented. At the moment, the real estate industry is one of the most active and important growth engines (fig. 9). Even while prices are extremely overheated and properties are only available for absurd prices in the most of China's big cities: local governments and state banks rely on rising real estate prices in order to keep a continuous boom going and therefore render containment measures of the central government generally ineffective. In part, local governments routinely use their property to raise new credits in order to use them for infrastructure, hospitals, education or social welfare benefits (Shih October 7 2016). As long as prices for real estates rise, borrowing new credits remains acceptable – but if prices should decline, problems for everything the local governments finance will be close at hand.

**Figure 9: Residential Housing Growth**

(in percent, year-on-year)



Ironically, the problem has some roots in another sector which has been extraordinarily prone to becoming massively indebted in the past. As discussed above, China's state-controlled banking system usually focuses on lending money to state-owned companies. Economists therefore view household lending as an appealing alternative to having banks give more money to unprofitable, "debt-ridden state firms that cannot be closed because they provide jobs to millions of workers" (New York Times September 25 2017). As authorities tried to alleviate the high levels of corporate indebtedness, short-term consumer debt has begun to surge and consumer lending has helped Chinese consumers "weather the gradual slowdown in the country's economic growth in recent years" (New York Times September 25

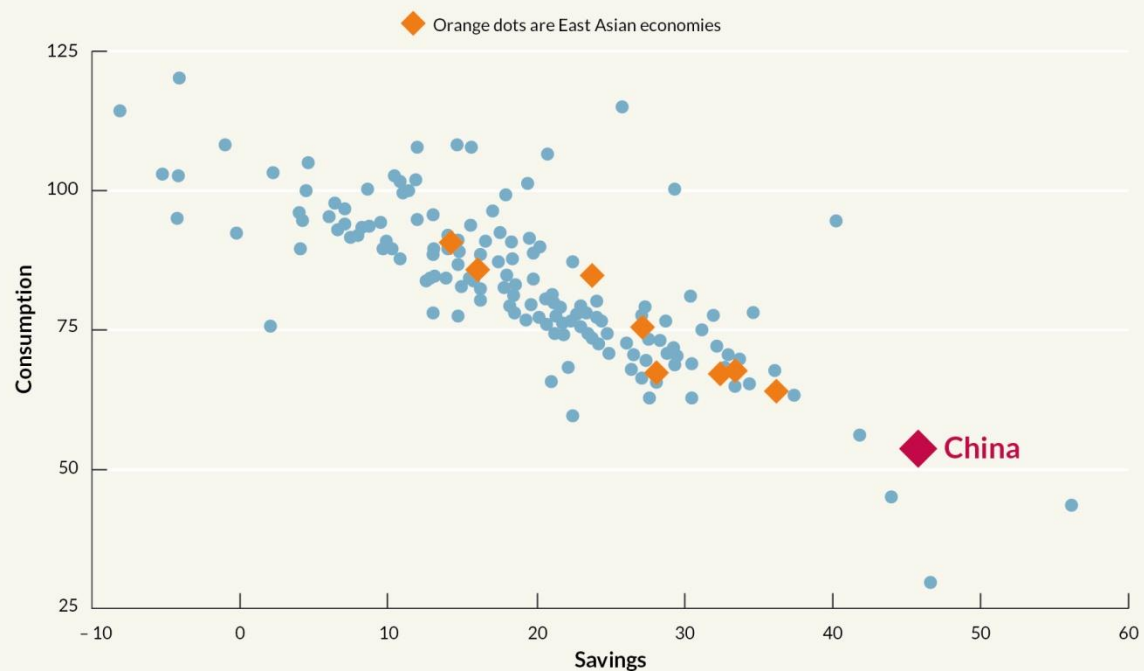
2017). One example for that process is Qiqihar, a city of five million people in the province of Heilongjiang: The local economy was detrimented last year when a large steel mill partially closed and communal- and state-owned enterprises laid off more than 40,000 workers. But even in Qiqihar the city's economy grew at an annual rate of 6.4 percent in the first half of 2017.

In the past, households' high savings rate has always acted as counterweight to highly indebted corporates and local governments. China's 2017 gross savings rate of about 46 percent of GDP seems to suggest little risk to the economy from the buildup in household debt at first glance. Analysts argue that household debt has therefore room to expand without representing a risk to the economy (Forbes April 26 2016). But there are hidden problems: "Down payments for new homes, which are relatively high in China, are often borrowed from family members" (Thomson Reuters November 11 2016). One therefore cannot simply assume that there isn't any debt there; or since it is family debt it would never be foreclosed on lenders. The swelling amount of property loans ultimately begins to slowly change the balance of Chinese debt: "The net savings of Chinese households, defined as total outstanding deposits minus total outstanding loans, have stagnated or even begun to fall, showing that Chinese people are generally saving less and borrowing more", a South China Morning Post report points out (SCMP August 6 2017). As a result, the stakes of avoiding a property bubble are growing as an increasing number of home buyers closely tie the real estate sector to the financial sector. This problem could become especially vital, since falling home prices could increase the number of non-performing loans as property owners find themselves unable to sell their homes or obtain additional loans to pay off existing debt. For some home buyers, monthly payments are already greater than their income, forcing them to borrow more in order to keep their homes (Forbes September 27 2017).

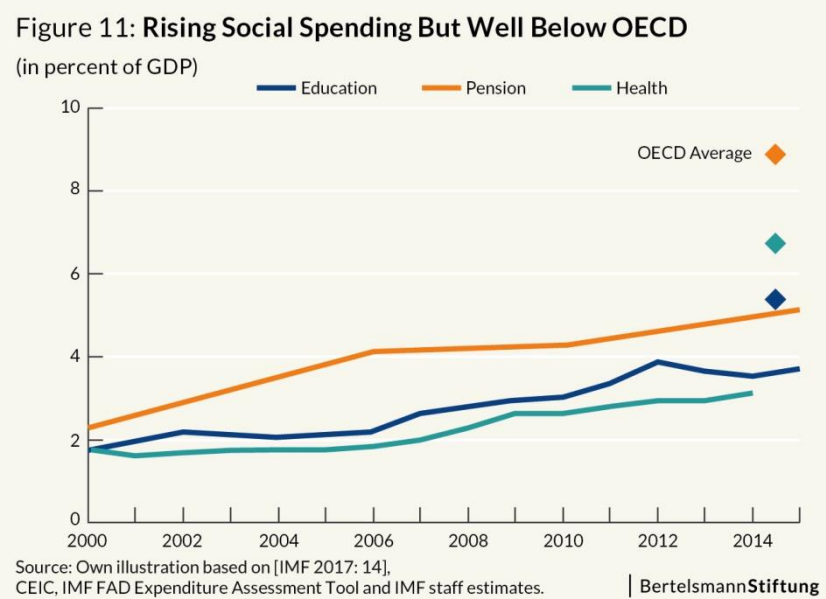
For these reasons, the IMF advised the Chinese authorities that a "change in the composition of fiscal policy to support rebalancing toward consumption and away from investment would allow faster consumption growth financed by a drawdown in household savings rather than higher debt" (IMF 2017: 11). Low consumption and high national savings would together translate into lower welfare for Chinese citizens and excessive investment and debt. Estimated at about 46 percent of GDP, China's national savings in August 2017 were 26 percentage points higher than the global average, mainly due to the household sector (IMF 2017: 13) (fig. 10).

**Figure 10: China is Major Outlier in Savings and Consumption**

(in percent of GDP, 155 countries)



Structural characteristics of the Chinese economy would be a part of the explanation for this, but so would be policy factors, comparatively weak social spending in particular (fig. 11). Especially lower-income households in China have to rely on a savings rate of plus 20–30 percent compared to minus 20 percent in many peers (IMF 2017: 14). A move toward international norms on social assistance could help lower excessive precautionary savings and reduce income inequality, which is among the highest in the world with the Gini index rising from 0.3 in the 1980s to about 0.5 in 2010 (IMFb 2017: 9). And higher health and pension spending might increase private consumption indirectly by further reducing households' need for precautionary savings: Public health insurance reaches nearly all of China's 1.4 billion people, but its coverage is basic, leaving patients liable for about half of total healthcare spending (Thomson Reuters July 11 2016). While excessive savings prove difficult for macroeconomic stability in their own right – allocating a low share of income to consumption leads to lower standards of living – their broad substitution with debt may prove to have even devastating results.



## Chinese financial debt

At 310 percent of GDP, China's banking sector is not only nearly three times the emerging market average but also above the advanced economy average (fig. 12). The IMF argues, that its growth in recent years "reflects both a rise in credit to the real economy and intra-financial sector claims" (IMF 2017: 19). China's banks are also the most profitable in the world, thanks to regulated interest rates. The increases in size, complexity and interconnectedness of these exposures have resulted in rising risks showing itself prominently in the institution of shadow banking: It is a way for institutions to boost leverage and profits while avoiding regulatory hurdles such as capital and provisioning requirements on bank loans. According to the IMF, the key channels appear to be large banks lending to small banks and non-bank financial institutions (NBFIs) in the largely short-term and collateralized wholesale market, banks or NBFIs investing in other banks' negotiable certificates of deposit (NCDs) as well as banks and NBFIs investing in shadow products issued by other NBFIs (IMF 2017: 21).

**Figure 12: Banking Sector Among Largest in the World**

(in percent of GDP, 2015)



About two-thirds of all lending in China by shadow banks appear to be "bank loans in disguise": A Bloomberg report notes that Bank lending jumped 10 percent in 2015, but over the same period investments known as Wealth Management Products, which is a speculative category of loans and other investments that banks keep off their balance sheets, rose a staggering 30 percent. Hidden lending on banks' balance sheets (which forms part of short-term investment) and off-balance sheets would add up to a total of 34.4 trillion yuan (\$5.2 trillion), representing "more than five times the amount of subprime loans outstanding in the U.S. at the time of the 2008 financial crisis" (Bloomberg August 24 2016). At the time, financial institutions could evade regulatory limits regarding leverage, mortgages as well as other kinds of securitization by using special purpose vehicles. It therefore became conventional wisdom that regulators allowed extreme risks to build up in this part of the financial system, including the notion that regulators in the developed market economies have as a result taken action against on such activities (The Economist September 7 2013). The recovery of the shadow banking activity in the recent years in the face of seemingly strengthened regulatory control may therefore come as a surprise. But shadow banking can still supplement or sometimes even replace the traditional banking sector by providing some useful functions: the creation of synthetic safe assets, the opportunity of regulatory arbitrage (especially when traditional banking activities are being constrained) and the reuse of collateral that is often associated with the set-up of lengthy collateral chains (Adrian September 14 2017). Regulatory arbitrage might be a problematic activity in its own right, but the other two major activities of the shadow banking sector can serve useful purposes in the context of a country's financial structure. But that can only be warranted, if regulators are able to provide effective supervision ensuring the safety of traditional banks as well as capital markets by mitigating the risks that shadow banking implies for financial stability "due to lower safety margins and less regulation" (Gabrieli 2017:3).

In China, however, It appears that shadow banking "is largely driven by regulatory arbitrage and attempts by regulated banks to avoid regulatory constraints" (Gabrieli 2017:4). Limitations by the government extend to bank deposits, lending rates and price competition in the banking sector. In that way, a strong government influence enables the Chinese state to guide credit toward specific sectors and individual recipients while effectively excluding

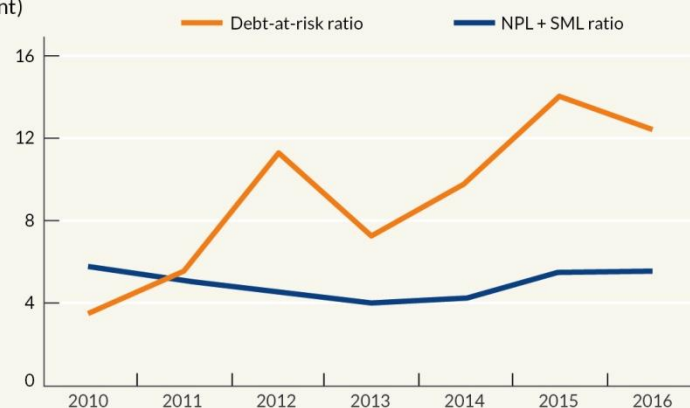
other would-be borrowers. Limitations such as these can however be circumvented by a range of instruments known as "Wealth Management Products" that have been created by many Chinese financial institutions. These usually come with higher yields than traditional bank deposits and are able to provide credit for private sector borrowers as well (Gabrieli 2017: 7). Through its avoidance of official interest rate restrictions, shadow banking may therefore enable not only a credit intermediation which is more intensely connected to market pricing signals than formal bank credit can be; lending to possibly politically eschewed borrowers should be considered as another important feature of shadow banking, too. But still Wealth Management Products, being off balance sheet financial vehicles, continue to create further uncertainty regarding credit quality. During the 2008 financial crisis, special purpose vehicles had to be brought onto the balances of many traditional banks, sometimes accompanied by devastating results, comprising events such as bank rescues. Experiences like these suggest a belief of Chinese investors "that the target return of these products is effectively guaranteed by any bank or Trust associated with the product" and ultimately by the Chinese government (Gabrieli 2017: 7). The risks of shadow banking financing for that reason may ultimately significantly impact the balances of the public sector as well.

According to the IMF, these exposures raise several concerns: "When banks purchase investment products, the risk-weighting may be lower than in the case of regular loans even when the underlying assets are loan-like" (IMF 2017: 21). So although intra-financial sector credit may often be short-term and collateralized, these products could prove less easy to redeem in practice. NBFIs do not have official access to PBOC funding, while the price of the underlying assets could gap lower if large-scale liquidity stress should occur, thereby amplifying the resulting shock. The IMF notes, that the "numerous stages of leverage make "seeing-through" to the underlying asset more difficult for banks, regulators and investors". Regulators should therefore coordinate necessary supervision effectively to ensure that financial conditions do not tighten to much, in order to make sure all solvent banks have equal access to the PBOC's lending facilities as well as allowing insolvent financial institutions to exit (IMF 2017: 21).

According to the Chinese government, the growth in the size and complexity of the financial sector is still manageable (IMF 2017: 22). Still, total bank assets grew by 16 percent only in 2016. Smaller, unlisted and policy banks grew fastest and the expansion of bank assets seems to have been driven by claims on the government and NBFIs, accompanied by a steadily increasing reliance on wholesale markets to fund this asset growth (IMF 2017: 39). Concerns about underlying asset quality remain while the rapid credit growth feeds into a series of asset price booms, including bonds, stocks, and housing (fig. 13).

**Figure 13: Indicators of Asset Quality**

(in percent)



Note: The NPL + SML ratio measures the share of non-performing and special mentioned loans in total bank loans. The debt-at-risk ratio is defined as the ratio of the borrowings of the listed companies with interest coverage ratio below 1 to the borrowings of total listed companies (for methodology see April 2016 IMF GFSR).

Sources: Own illustration based on [IMF 2017: 39], CEIC Data Company Ltd.; HKMA; Haver Analytics; WIND; IMF Global Financial Stability Report (GFSR); and IMF staff estimates.

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This shortage on safe assets might provide further tailwind for other credit spreads. Some analysts agree that such a growing shortage of deposits at a systemic level is worrying (Bloomberg February 27 2017). They can argue that a banking system of China's size should not become too reliant on financing from markets without far reaching ramifications, including impairment of the stability of the currency as well as overall growth and the very success of President Xi Jinping's corporate deleveraging campaign (Bloomberg September 8 2017).

A discussion paper by the McKinsey Global Institute points out, that there are other perils ahead as well: noticing that the share of global corporate debt in the form of bonds has nearly doubled, the experts agree this is a positive trend, leading to a diversification of corporate financing (MGI June 2018: 2). In China, the share of bond financing in corporate debt alone seems to have risen from only 1 percent in 2000 to 11 percent in 2016, with issuance climbing from \$33 billion in 2007 to almost \$357 billion in 2017 (MGI June 2018: 6). But as interest rates on sovereign bonds fell to historical lows, investors' interest in bonds with higher yields (and higher risks) appears to have grown globally. The correspondingly rising amount of high-yield bonds in need of refinancing could create problems in some sectors and especially among weak performers: in the coming years, a record amount of speculative-grade corporate bonds might need refinancing (MGI June 2018: 9 f). In China this process happens under unusual circumstances: While the value of China's nonfinancial corporate bonds outstanding appear to have increased from \$69 billion in 2007 to \$2 trillion by the end of 2017, the astounding amount of 95 percent of corporate bonds outstanding is denominated in the local currency. Therefore, generally less transparency on corporate financial performance meets with a multitude of corporate issuers who might already have fragile finances relative to the size of their individual debt-service payments. In a global context, default risks are mostly concentrated in smaller issuers. But according to the authors of the discussion paper, in China the share of bonds at higher risk of default (24 percent) is similar to the share of companies at higher risk of default (21 percent) (MGI June 2018: 17 f)

Additionally, after ten years of low interest rates they currently appear to be heading upward at an unknown pace. While rising interest rates should not affect the ability of most companies to make interest payments, since many bonds offer fixed rates for the duration of the respective contract, it might make refinancing bonds more expensive for companies seeking to issue new bonds. This lowering of the interest coverage ratio would then put more bonds at risk of default (MGI June 2018: 18-20). The corresponding MGI simulation proposes a 200-basis-point rise in rates, which would lead to a rise of the Chinese share of corporate bonds at higher risk of default to 43 percent, or \$850 billion, up from \$475 billion in 2017. The authors note, however, that the central bank heavily influences interest rates and that the authorities might be careful to avoid any large rise in interest rates that could put such a considerable share of the corporate bond sector at risk (MGI June 2018: 20).

Hidden lending and partially risky bond issuance as generally unavoidable ways to circumvent governmental restrictions play an important role in the functioning of the Chinese banking system. Their rapidly growing importance points to the fact that there is a considerable imbalance regarding the demand for new credit as well as its distribution. The general practice of re-labelling assets and generous lending off the books makes for a significant decrease of asset quality. If the Chinese debt bubble bursts, these claims might prove to be a consistently growing menace for the banking system which will only then reveal its extent by measure of its consequences.



## Conclusion

Given the high savings ratio, large foreign reserves and adequate capital the Chinese authorities claim to be confident that the financial risks presented in this paper are manageable (IMF 2017: 22). And indeed, in regard of liquidity Chinese banks superficially seem to be doing very well: At 67.3 percent, their median loan-to-deposit ratio is the lowest among major economies (Bloomberg August 24 2016). But the previously described intense shadow banking activities of many institutions create another picture: The Bank of Jinzhou Co. for example has a conservative loans-to-deposit ratio of 61 percent. But since it seems to have huge investments in shadow-banking products not marked as loans as well, deposits appear to be actually less than half of total assets (Bloomberg January 19 2017). Under the influence of the growing relevance of the shadow banking sector and the impossibility to control it effectively, risks for any reasonable estimation of asset quality remain high. Still, analysts of Standard & Poor's pointed out that China has a number of tools at its disposal to deal with disruptions resulting from its debt levels (New York Times September 21 2017). Such include strong foreign exchange reserves, big net overseas investments and considerable trade surpluses with other nations. Therefore many spectators believe the worst-case scenario if Chinese debts implode would be a situation similar to that in Japan: Since most creditors are Chinese, almost all debt is held in China and for every yuan of debt there should exist a yuan of credit. While for example the US debt is substantially held abroad, China has only little liabilities in other countries (New York Times September 21 2017). But like Japan, China might have to pay a high price anyway: the Japanese economy has suffered from stagnation and deflation for more than two decades by now and has great difficulty with breaking this effective cycle (Bluth 2017: 5 f).

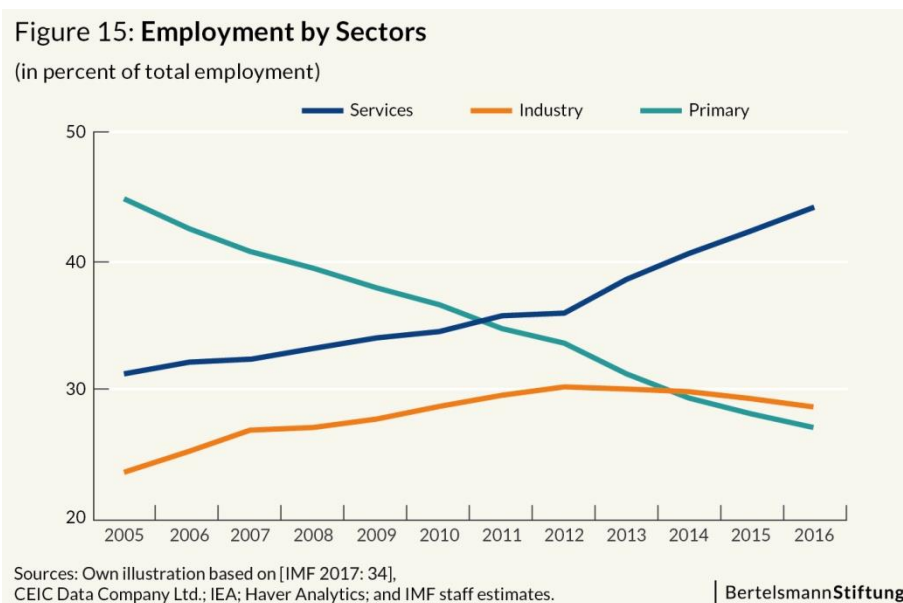
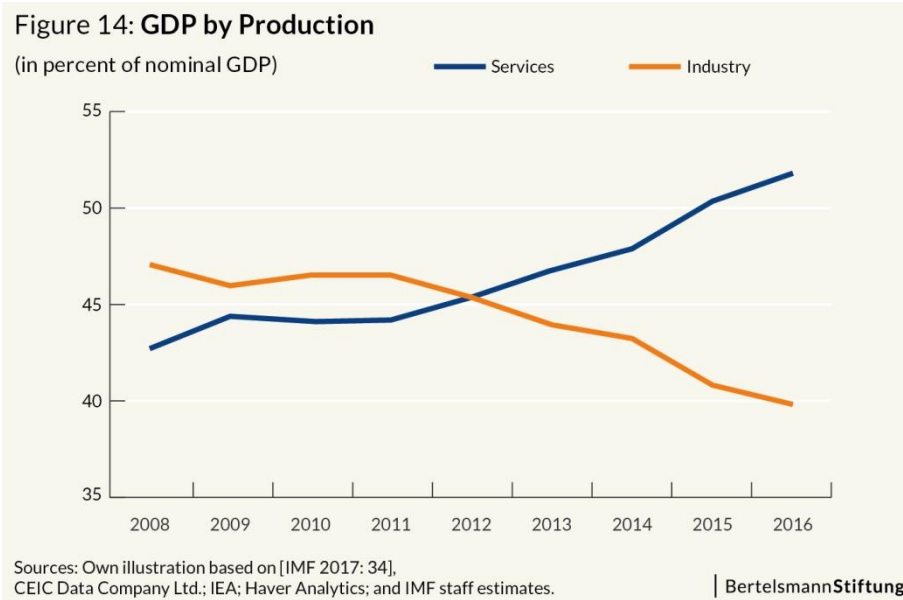
The large Chinese foreign exchange reserves also have always had a kind of soothing effect on economists as well as the Chinese authorities themselves. In China, the foreign exchange reserves could have been seen as a somewhat financial cushion for times of trouble. Three years ago, they were at nearly at an impressive \$4 trillion. But in January 2017, China's central bank announced that its foreign exchange reserves had slumped to \$2.998 trillion (New York Times February 7 2017). When they were last at \$3 trillion, in early 2011, China's economy had still been growing at a much faster pace — and the central bank's foreign-exchange reserves were growing rapidly as well. Since the country's economic growth has slowed considerably, companies and families send their money out of the country for investment or safekeeping. If the Chinese central bank didn't react, according to the New York Times "the net outflow of money would cause the renminbi to weaken against the dollar". The Chinese government appears to plan to stabilize the value of the renminbi in order to keep the money within its borders. China's central bank has therefore "been spending billions of dollars from its reserves each month to prop up the renminbi and to slow its weakening" (New York Times February 7 2017). But if the renminbi were to start to dwindle sharply, many families and companies may choose to move their money out of China to minimize their losses.

The dwindling reserves may therefore reveal some concerning truths about the direction the Chinese economy is about to take. The interaction of local and central government when it comes to utilizing debt to avoid crises as well as to gain or keep political momentum in terms of growth and occupation has to be characterized as short-sighted, as long as these practices still prevail. While it could be said with some consideration that resorting to loans to avoid imminent crisis in 2008 might have been a rewarding course, at the end of 2017 it seems that the steep rise of debt since then has made a lasting, negative impact on the Chinese economy. The control of credit availability by different levels of the government whilst massively investing in infrastructure and housing by way of LGFVs has laid the groundwork of a bubble the impending burst of which might by far exceed the negative outcomes of the one avoided ten years ago.

Competitive neutrality may be one way out of the vicious circle of low company performance and the taking up of cheap loans. This would have to be accompanied by a credible



decoupling of private and political economic interests, enabling entrepreneurial freedom as well as the necessity for SOE's and LGFV's to prove on the market. That, of course, should be linked to a broader and more comprising social net that can balance the effects of state-owned enterprises' social functions on a societal scale. Being in a structural change from a production-oriented economic model towards a more service-oriented one, China needs to balance old sinecures against the requirements of a more modern system that depends heavily on consumption (fig. 14; 15).



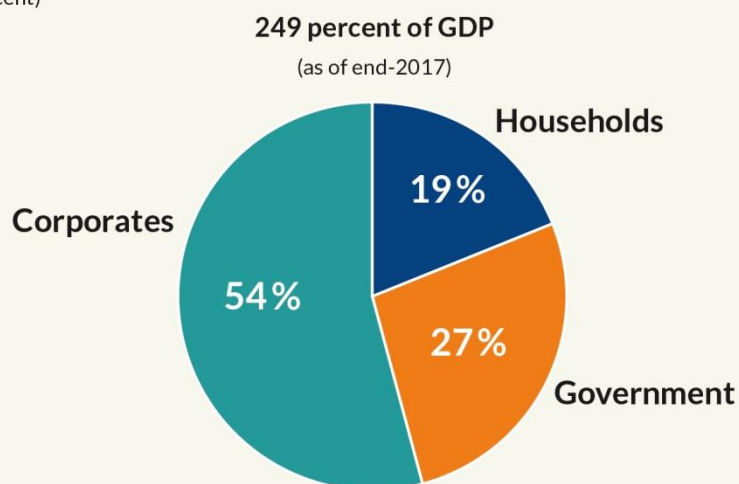
The extraordinarily high Chinese savings rate is shrinking but savings still have to serve as a social security since there are no sufficient social safety, pension and health nets available for large parts of the population. This lack of governmental social spending creates a paradox situation in which rising consumer debts and excessive savings continue to coexist. A considerable strengthening of citizens' social securities would very likely lead to a boost of sustainable consumption while significantly containing the further rise of consumer debt (IMF 2017: 14). Increasingly, the shadow banking industry provides possibilities to circumvent higher restrictions on lending enacted by the central and city governments. In that way, hidden lending poses a continuously growing threat to the functioning of the Chinese banking

system that might only be rectified by a far-reaching devaluation of the Renminbi, as Victor Shih (October 7 2016) proposes. The ongoing erosion of asset quality happening mainly off the books could very possibly create a situation, which might compromise the stability of the banking system as a whole. The possibility that the Chinese banking system may become overly reliant on market financing in the course of avoiding regulatory restrictions is fueled in part by a constantly overheating real estate market. It seems that one source of this boom appearing on a private and corporate level remains the intense relation between political stability and constantly high growth figures (Shih October 7 2017).

As long as China's macroeconomic policy stays focused on a growth under all circumstances it will continue to evade the fact that a lot of the country's debt is bad debt and ultimately should be written down (Shih October 7 2016). If this doesn't happen, the estimation of an overall 249.3 percent of GDP total domestic non-financial sector debt at the end of 2017 as presented in this paper could very well extend further: the IMF sees China's non-financial sector debt to hit nearly 300 percent of GDP by 2022 (IMF 2017: 10) (fig. 16).

The repercussions of a failure of the Chinese government to appropriately address the multitude of problems feeding into this growing debt bubble could be unprecedented. They seem to pit the political stability connected with stabile growth against the macroeconomic realities of a global world. With its LGFV funding program, China bought time to delay the effects of the 2008 financial crisis. It is still open, if the Chinese central government will be able to effectively restrain the lending spree of local governments and thereby take the risks of a political situation in which economic success might happen without guarantees. If it fails to do so, it might be dangerous for the global economy to further depend on the growth of a country where economic rules would then continue to be made up rather than followed.

**Figure 16: Domestic Non-financial Sector Debt**  
(in percent)



Sources: Author's own calculation, IMF, BIS, National Bureau of Statistics of China.

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## Abbreviations

BIS	Bank for International Settlements
GDP	Gross Domestical Product
IMF	International Monetary Fund
LGFV	Local Government Financing Vehicles
NBFI	Non-bank financial institution
NCD	Negotiable certificates of deposit
PBOC	People's Bank of China
PPP	Public Private Partnerships
SOE	State-owned enterprise
WEF	World Economic Forum
WMP	Wealth Management Products

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